DOCUMENT RESUME

ED 344 925 TM 018 259

AUTHOR Brown, Dave F.
TITLE Altering Curricula through State Testing: Perceptions of Teachers and Principals.
PUB DATE Apr 92
NOTE 31p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, April 20-24, 1992).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Administrator Attitudes; Curriculum Development; Educational Change; *Elementary School Teachers; Grade 5; Grade 6; Intermediate Grades; Interviews; *Principals; *State Programs; Surveys; *Teacher Attitudes; Teaching Methods; Test Coaching; *Testing Programs; Test Results
IDENTIFIERS *Mandated Tests; Teaching to the Test; Testing Effects

ABSTRACT

Educators' perceptions of the effects of state mandated testing on instructional practices and curricular decisions were studied. An ethnographic interview study was conducted with 30 fifth- and sixth-grade teachers and 12 principals from Illinois, New York, and Tennessee. Forty-one of the 42 respondents agreed to have their interviews audiotaped. Schools in each state represented a variety of enrollments from low to high socioeconomic status and varied minority composition. Teachers generally agreed that reading and mathematics sections of the state mandated tests assessed skills that more closely matched their curricula than did sections on language arts, science, or social studies. Teachers also reported altering the scope and sequence of the curriculum and eliminating concepts that were not covered on state tests. Participants also reported reluctance to use innovative instructional strategies and reported reliance on traditional instructional measures in the belief that these strategies would better prepare students for state tests. An overriding theme was the reported time constraints imposed by the pressure associated with assuring successful student performance. There is a 21-item list of references. (SLD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

DAVE E. BROWN

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED344925

ALTERING CURRICULA THROUGH STATE TESTING:

PERCEPTIONS OF TEACHERS AND PRINCIPALS

Dave F. Brown
Department of Childhood Studies and Reading
West Chester University
West Chester, Pennsylvania

Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA, April 1992

TM018259

BEST COPY AVAILABLE

Altering Curricula Through State Testing: Perceptions of Teachers and Principals

Introduction

Efforts by all 50 states to improve education in the public schools and to hold personnel accountable for successfully educating students have focused on the adoption of state mandated tests. The majority of the assessment instruments used by states are of a standardized, multiple choice design much like those produced by commercial testing companies and used for the past 70 years by schools to assess competence on basic skills. The importance placed on such measures as an indication of success of American educators' efforts are reinforced through the actions of the United States Congress who has continually provided funding for the National Assessment of Educational Progress (NAEP). The words *educational progress* within the acronym NAEP indicate the value that many place on test scores as determinants of success in America's public schools. The adoption, as well, by all 50 states of some form of state mandated testing indicates that at least a majority of state legislators is willing to appropriate funding to establish assessment instruments as a means of interpreting educational effectiveness.

The results of these tests have become a critical aspect of educational policy with the purpose of initiating improvements within the schools. Assessment instruments have been used for a number of policy oriented purposes such as providing evidence of school and program effectiveness, allocating funds to schools that have adequate scores,

evaluating school effectiveness, accrediting school districts, and certifying successful completion of high school (Airasian & Madaus, 1983).

If test scores are interpreted by the public as appropriate means for assessing school system accountability, the implication is that there must be an interrelatedness between the concepts that are tested and the curriculum that is taught. The landmark decision handed down in the *Debra P. v. Turlington* (1981) case in Florida stated that minimum test scores used as a basis for graduation requirements must measure what is actually taught in the schools. Although assessment instruments serve the purpose of diagnosis and prescription of individual students, the impact of this decision dictates that test content be viewed as a concrete statement of expected content to be taught in the classroom. Since this decision, curricular improvement has become the main thrust of several state mandated testing programs.

Many of the state tests are high stakes situations in which the results lead to serious implications for students, teachers, and administrators. Based on the amount of emphasis placed on these scores, educators react through various means to assure student success on state assessment instruments. As a result, students are subjected to a variety of instructional and curricular changes in their educational programs.

As state test scores continue to be interpreted by the public and legislative bodies as a sign of either success or failure among local school systems, it becomes important to determine whether these instruments are effective mechanisms for improving the instructional process and eventual learning outcomes for students. The following study was initiated in an effort to determine educators' perceptions of the effects of state mandated testing on instructional practices and

curricular decisions. The research was designed as an ethnographic interview study that investigated teachers' and principals' perceptions of state mandated testing in upper elementary classrooms (fifth and sixth grades) in three states: Illinois, New York, and Tennessee. Although the findings are somewhat congruent with previous studies concerning external assessment, a need exists to provide data to state department personnel that is based on actual teacher reports of alterations in curricular and instructional practices and to make assessment designers aware of the impact that these alterations may have on student learning environments.

Literature Review

Changes in society and the public's interpretation of the role of schooling have had an effect on the degree of utilization of test scores throughout the past 80 years. The increase in the use of testing during the 1980s as an accountability measure has raised questions and prompted research concerning the effects of standardized testing on curricular decisions and instructional practices. The majority of research studies on the effects of external testing have been implemented and reported as a response to standardized commercial tests used nationally. Although some of the studies presented herein deal with state assessment from survey studies, none of the literature provides teacher or principal interview data. These became overwhelming reasons to initiate a study that would specifically examine teachers' and principals' perceptions of the effects of state mandated tests on classroom instructional and curricular practices.

Emphasis on scores: Resultant effects on curricular decisions

Several research studies have examined the effects of greater importance placed on student test scores. Koretz (1988) reported that state testing has become a high stakes enterprise in which students, teachers, building level administrators, and superintendents need to initiate measures to assure student success on these instruments. A survey by Corbett and Wilson (1990) found that state testing that is tied to student performance consequences has a considerable effect on a school district's organization and culture. An overall school system culture that emphasizes high student test scores has the potential to greatly affect instruction in each classroom.

Added to the pressure associated with the emphasis on students' scores is the concern that state tests have become a high stakes situation due to the publishing of results in newspapers and on television and the resultant comparison of scores among school systems. Rottenburg and Smith (1990) found that the editorial attention and media coverage of standardized test scores contribute to teachers' and principals' feelings of shame and pressure them to do what is necessary to avoid these feelings. These societal factors set the stage for probable alterations in instructional strategies and in curricular emphases to improve students' scores.

Alterations in control of curricular decision-making

Several studies have indicated that teachers' curricular decisions have been altered due to the effects of state mandated tests. Madaus (1985) reported that statewide testing greatly diminishes local control over the curriculum. His research from a number of states with minimal competency tests (MCT) reflected a *narrowing of the curriculum* -

a response by educators which limits the range of curricula covered to content that is on the test. Findings from several studies have indicated a narrowing of the curriculum created by the importance of test scores (Corbett & Wilson, 1990; Darling-Hammond & Wise, 1985; Stake, Bettridge, Metzer, & Switzer, 1987). Tyson-Bersten (1988) reported that decisions concerning textbook selection in many states are made primarily on the basis of the match between the tests and the book (cited in Corbett & Wilson, 1990). These decisions have the capability to considerably alter or drive curricular direction.

Government intervention in the 1981 *Debra P. v. Turlington* case in Florida increased the match between tests and curricula in that state and may also have influenced teachers in other states. Martinez and Lipson (1989) found that since 1978, standardized tests scores have risen across the country as districts have discovered that scores can be raised by closely aligning curricula with standardized tests. Neill and Medina (1989) reported that school systems in 13 states were attempting to align their curricula with standardized tests so that students did not spend their time studying material that would never be tested. These curricular alterations have the capacity to effect instructional practices

Curricular alterations related to time

The allocation of time resources regarding curricular design has been a concern among teachers who have initiated changes to better prepare students for standardized assessments. Salmon-Cox (1981) surveyed teachers who reported the adding and deleting of information and increasing time on specific skills as a result of the emphasis on these skills from assessment instruments. Among teachers surveyed in one study, 25% reported taking time to teach a topic they otherwise would not

have because of testing content (Romberg, Zarinnia, & Williams, 1989). Content analysis of interview data with teachers in one study revealed the following effects of external testing: altering curricular emphasis, teaching students how to take tests, and having less time to teach other material (Darling-Hammond & Wise, 1985). Romberg et al. reported that because of the influence of testing, teachers increased instructional time for basic skills and decreased their emphasis on creative projects, cooperative learning, and use of computers. Lewin (1984) noted that testing inhibited teachers from devoting more time to experimentation and guided discovery methods of instruction. Aware of the pressures placed on them to raise student test scores, teachers implement curricular decisions which they believe will most likely lead to improved student performance on external tests.

Teachers' reporting of curricular changes

Research on teachers' reports of changes in curricula as a result of testing is quite varied. Green and Stager (1985) surveyed 500 teachers and found that attitudes toward external testing programs were indifferent to negative with most teachers agreeing that the tests seemed to shape the curriculum and what they taught. In a survey of teachers by Darling-Hammond and Wise (1985), 60% reported that standardized testing had affected their teaching in the following ways: the altering of curricular emphasis, teaching students how to take tests, and having less time to teach other material. Another survey of teachers revealed that 40% of teachers believed that standardized tests can create pressures that have an effect on the content that they cover (Kellaghan, Madaus, & Airasian, 1982).

Understanding the scope of curricular alterations initiated by educators as a result of the emphasis on test scores is limited perhaps only by the number of studies researchers choose to conduct. These studies indicate that teachers do not fear reporting curricular actions that they have initiated to better prepare students for external tests. The emphasis on students' scores and the resultant view that the public holds of teachers and schools through these scores tend to provide fuel to educators at all levels to initiate curricular changes to assure student success on external assessment instruments.

Methods and Procedures

Theoretical Framework

The study was conducted using qualitative research methods for the purpose of providing an in-depth description of teachers' and principals' perceptions of state mandated testing and its effects on curricular decisions and direction. An *interpretist theory* (Erickson, 1986) was the guiding philosophy in initiating this study as evidenced in the design of the study. The researcher believed that the most appropriate method of understanding the actions that teachers initiate as a result of testing was to consider *insider perspectives* (Eisenhart & Howe, 1990). Evidence of this theory is in the design of the study in which interviews were used to reconstruct teachers' actions associated with the increased emphasis on testing at the state level. Erickson stated, "The task of interpretive research is to discover the specific ways in which local and nonlocal forms of social organization and culture relate to the activities of specific persons in making choices . . ." (p. 129). As teachers are pressured by several sources to produce better test scores, they make

specific choices in reacting to accomplish this goal.

The broad framework of *symbolic interactionism* as proposed by Blumer (1969) is inherent in the researcher's philosophy through the realization that social influences have created the conditions prompting this study. Blumer explained this theory based on these premises: humans act toward things on the basis of the meanings that things have for them, the meanings of such things are derived from social interaction, and these meanings help people to interpret situations. This study examined the meanings that teachers assigned to state mandated tests and the actions that teachers' initiated following their interpretation of the testing situation.

Procedures

A qualitative research methodology was employed in the study. Teachers and principals were interviewed to gain their insights on the effects of state mandated testing on curricular and instructional practices. Qualitative research is concerned with understanding social phenomena from the actors' perspectives (Taylor & Bogdan, 1984). Eisenhart and Howe (1990) explained that first person accounts of events and actions are necessary to provide a basis for research inferences. Based on these beliefs, an interview approach was chosen to provide in-depth data concerning teachers' and principals' beliefs concerning state testing.

A nonscheduled interview guide was developed to assess teachers' and principals' views of state testing's influence on curricular and instructional actions. Goetz and LeCompte (1984) describe a *nonscheduled interview guide* as an instrument in which the same questions and probes are used for all respondents, but the order in which

they are asked may be changed according to how individuals react. An advantage of a standardized interview form with the same probes for all respondents is its strength in enhancing content analysis and reliability.

An initial interview guide was developed based on previous studies concerning standardized testing that involved both surveys and interview schedules. Researcher concerns which guided the study were integrated into the interview schedule. Based on a pilot study of the instrument with several teachers and administrators, a few alterations were made in the final instrument. The interview schedule was based on the following questions which guided the research:

1) What relationships exist between state tests and teachers' curricular decisions and instructional practices?

2) What are teachers' perceptions of the relationships between current curricular content and the content of state tests?

3) What effects do state mandated tests have on teacher control of curricular content?

4) Do teachers and principals perceive state mandated tests as appropriate instruments for evaluating student abilities?

Each interview session was conducted by the researcher and lasted for approximately 45 minutes. Forty-one of the forty-two respondents agreed to be audio-taped. Responses for the interview that was not taped were hand written.

Taped interviews were transcribed and responses for each question were used to develop basic categories of analyses and to reduce the data into manageable divisions. The *constant comparative* method was used in analyzing the data which involves the activities of sorting, selecting,

rearranging, and comparing the data in search of themes (Glaser & Strauss, 1967). As core variables or themes surfaced through reading the transcriptions, they guided further analysis of the data. Findings were developed from the examination of core variables. *Core variables* have three characteristics: they reoccur frequently in the data, they link the data together, and they explain variation in the data (Hutchinson, 1988). Original variables discovered by the researcher were compared with variables developed independently by two other researchers who analyzed the data. This process of peer examination is used in qualitative research methods to verify themes and to provide internal reliability to the study (Goetz & LeCompte, 1984).

Subjects

Teachers and principals from three states--Illinois, Tennessee, and New York--were chosen to participate in the study. These states were chosen because of the variations which exist in the amount of time that state testing has been in existence in each state and to provide diversity of educational settings from which to collect data. New York has implemented some form of state testing for approximately 30 years; Illinois has been using state tests for four years, and Tennessee was in its first year of implementation at the time the study was conducted.

Schools from each state varied in the composition of student enrollments from low to high socioeconomic status and also varied in percentage of minority students. The communities from which the schools were chosen were a mixture of rural, suburban, and city. Teachers and principals from six elementary schools were interviewed in Tennessee from two school systems: both a city and rural system. The participants from Illinois were selected from a suburban school system of four middle

schools. Interviews in New York were conducted in four suburban elementary schools located in high socioeconomic communities.

Fifth and sixth grade teachers were chosen because of the proliferation of testing that typically occurs at these levels. Superintendents from each school system were contacted and were responsible for selecting schools from their system to participate in the study. The principals from each building selected teachers to participate based on the following criteria: taught for five or more years, have tenured status, and taught areas of the curriculum that are assessed by state mandated tests. It was believed that respondents would be more willing to provide information on such a controversial issue if the security of tenure had been obtained. Due to the design of each state's testing procedures, fifth grade teachers were interviewed in Tennessee and sixth grade teachers in New York and Illinois. Thirty teachers and twelve principals were interviewed for a total of 42 respondents.

Findings

The following major themes emerged from the analysis:

1) Teachers generally agreed that the reading and mathematics sections of the tests assessed skills that more closely matched their curricula than did the sections of language arts, science, or social studies.

2) Teachers reported altering the scope and sequence of the curriculum and eliminating concepts that were not covered on state tests (narrowing the curriculum).

3) Participants reported a reluctance to use innovative instructional strategies (e.g., whole language approach, cooperative learning, higher order thinking activities) and mentioned the use of more traditional instructional methods (e.g., lecture, recitation) due to the belief that these strategies would better prepare students for state tests.

As findings are described in more detail, sample statements from interviews will be provided to substantiate these generalizations. In some instances, the number of participants who reported similar responses will be provided.

Reported link between curricula and state test content

Responses relating to the relationship between state tests and the curricula varied among teachers, however, there were several similarities in responses from participants from the same state. The majority of teachers (18 of 30) reported that they were satisfied with the match between state reading and mathematics sections of the tests and their curricula in those two areas. Their responses characteristically mentioned that the concepts in reading and mathematics were universal and that skills required for successful performance in these areas were common to any text or curricula.

The exception in the area of reading emanated from the New York respondents who mentioned that the state reading test utilizes the cloze procedure. *Cloze procedure* is an assessment strategy in which words from text are deleted and spaces are provided in which students are expected to choose an appropriate word that could be used in that specific context. Four of the respondents, including a principal, perceived this process as a method of encouraging instructional practices that would

emphasize cloze exercises. They believed emphasis on the cloze procedure to be inappropriate as an instructional strategy. For these teachers, it also affected curricular and instructional strategies. The following teacher's comment indicated some of the concern: "The first few years they switched to cloze we were allowed to buy these cloze workbooks and go like crazy with them." A New York principal provided this remark:

> I think we've altered our reading to accommodate the PEP test because we use the cloze procedure. We spend a lot of time instructing in cloze. I think we spend too much time on cloze procedure. Cloze is a technique that is fine to use and we should be aware of it, but when everything is based on it, it's kind of difficult.

Despite teachers' reported satisfaction with the match between state reading tests and their curriculum, New York teachers and one Tennessee teacher mentioned altering the reading curriculum to better prepare students for the state assessment.

The general agreement of the match between the mathematics sections of the state tests and the curriculum were qualified by concerns regarding sequencing. Half (5) of the Illinois teachers were concerned that the mathematics section of the state test created the need to teach concepts out of sequence. An Illinois teacher commented:

> Math objectives within this district probably are going to change after seeing the state test this year. The sequencing of them will change because the state test seems to have a lot of geometry on it, and that's a fourth quarter skill. So, I would imagine that if our scores are lower, then geometry is going to be moved up to the third quarter. All of the objectives are pretty much the same, it's just that our sequencing is such that alot of what was on our fourth quarter objectives were on that test before we finished the fourth quarter.

This comment supports the finding that several (6) other teachers reported: a willingness to alter the sequence of concepts to improve

student test performance.

New York and Tennessee teachers reported dissatisfaction with the link between the social studies section of their state tests and the curriculum. Seven of the ten Tennessee teachers mentioned that the test presented numerous items involving reading graphs and charts for which students were not prepared due to lack of instruction on these concepts. Teachers did not provide responses indicating whether they believed that reading graphs was an important skill for their students to master. One of the Tennessee teachers summed up the beliefs of several respondents with this comment:

> In my mind, we could test the children in grammar, math, and reading. Any test over those areas I feel could be valid anywhere in the United States. But not those other areas because those books are . . . you pick up one science book and it may have a unit on space. Well, you might pick up another one and it doesn't. You don't have the same concepts . . . it's not consistent with every book.

The New York social studies section of the state test consists of a writing segment in which students are required to write an essay response to questions. Several teachers provided comments indicating that the questions were too simplistic for the students. None of the New York teachers reported satisfaction with the social studies section. Seven of the New York respondents indicated that the social studies curriculum was more advanced and provided more concepts pertinent to sixth grade students than the questions asked on the state test. Respondents did not indicate, however, whether they believed the essay format to be either appropriate or inappropriate for assessing social studies knowledge.

Three teachers professed that state tests were ineffective for assessing students because of the inability of the tests to measure what

students needed to know about life outside of school to survive. An Illinois teacher discussed the frustration she felt with the testing instrument:

> Some of the kids just haven't had the material. We have kids that have moved often. We have kids that have very poor attendance patterns and lots of problems at home. So when they come to school, this is a refuge for them and a lot of times their minds are not on what you are trying to get across. I think some of the material is really inappropriate placed on these tests. Some of the kids need more survival type lessons. How to wash your clothes, how to feed yourself in the evening, how to get in when you are locked out, how many times a week should I wash my hair. These students have many other concerns that have nothing to do with the curriculum we have on these state mandated tests, and the kids could care less how they show up on paper because it is not an immediate concern of theirs.

This perception indicates the disappointment with the testing formats because of their lack of ability to assess domains that some teachers believe to be most important for students. This raises the question of whether the curricula of any of these schools introduce skills for daily living. Participants did not address this issue in their responses.

Respondents were asked whether state tests reflected their priorities for instruction. Of the 30 teachers interviewed, 22 provided responses indicating that the tests did not reflect their priorities for instruction and six of the 12 principals stated the same concern. The reported reasons that teachers provided for disagreeing with the tested concepts included the mismatch between social studies and science curricula and the tests, the inappropriateness of the cloze reading procedure, and the inability of the tests to reflect the practical knowledge that students need.

Teachers' dissatisfaction with the testing format is evidently not strong enough to keep them from initiating curricular changes to improve

students' test scores. Several (15) of the respondents provided comments indicating the helplessness among educators to alter state testing decisions and practices of which they were subjected. The actions, however, that they can control are curricular and instructional decisions that may boost students' test scores.

Reported curricular alterations

On an initial response to the effects that state tests have on what is taught, 19 teachers indicated that the tests had caused them to alter curricular direction in at least one subject area. Eight of the twelve principals also believed that the curriculum had been altered as a result of the state tests. Upon analysis of all the interview transcripts, 41 of the 42 respondents reported actions that indicated that either curricular or instructional direction had been changed as a result of testing. Among the changes that teachers reported were some type of alterations in all subject areas.

Reasons reported for making changes

Although teachers indicated that they may not agree with implementing curricular changes as a result of the tests, their concern for student success became an important factor in their decisions to alter the curriculum. A New York teacher had this to say:

> You know, you're caught in the philosophy, a philosophical type thing. I could say that I don't feel the tests do any good, but on the other hand, realistically children do take tests. All through their life there's always some sort of a measurement. So, you want them to at least have the opportunity to be successful on them. So, you're caught between philosophy and being realistic.

Another New York teacher justified her changes in curriculum for the same reason of helping students succeed:

> Testing has affected me in a way. I know that they [the test] ask a lot questions on probability and geometry. So I try to stress that a little more right before the test is given. I tell the students, "There's always a question on this and on this". . . so I try to zero in on something that would help them do well on the test.

One teacher responded that she believed it was her responsibility to prepare students for the tests, a responsibility that can be met by altering the curriculum so that it more closely matches the test. The need to implement curricular and instructional strategies to improve student scores was based on teachers' concerns regarding the emphasis placed on test scores by the general public. Respondents reported that this increased their emphasis on the test scores as well.

Reported reading curriculum changes

The importance of taking instructional time to prepare students for the tests was reported by a few teachers as a priority and their actions indicate this importance. Teachers were well aware of what was to be tested and had prioritized those concepts as indicated by their curricular emphases.

Specific reported alterations that occurred affected reading in the New York schools due to the cloze procedure that was previously mentioned. This comment was from a New York teacher:

> I knew the reading was done in the cloze way, so I made sure that throughout the year they had experiences using the cloze. I may not have done that had I not known that.

A reading teacher from Tennessee added,

> In reading I teach more *main ideas* because that's going to be on there [the test], that's a biggy. The state loves *main ideas* and *cause and effect.*

Illinois teachers reported altering their emphasis on recreational or free reading time due to questions asked on the state assessment regarding the opportunities for this during the week at school. Evidently, student responses to this question from the previous year indicated minimal free reading opportunities for them. When the results reached central office administrators, a decision was made to increase independent reading time at each school and to emphasize to students that additional time was being provided for this purpose. One school adopted a *Drop Everything and Read* (D.E.A.R.) program which involved one hour each week of independent reading by all persons in the building.

Reported changes in mathematics curriculum

Changes in mathematics due to test format was reported by respondents in all the schools in which interviews occurred. Most of these changes were related to the sequence in which concepts were taught. A Tennessee teacher spoke of the time of the school year in which state tests were given and its effect on the sequencing of the curriculum:

> I don't like having to give the tests in April when we still have April and all of May. It's sort of a guessing game. Which do you get in there? Do you get the fractions in, do you get division in, which one do you let go? Do you get it all in by April and then have two months when you don't do anything?

Five other teachers from all three states mentioned the need to change the sequence of specific mathematics skills to better prepare students for

state testing.

Specific changes in all three of the state tests were the influence of the recommendations from the National Council of Teachers of Mathematics (NCTM). Two of the concepts that were noticed as different than previous years' tests by teachers in both New York and Illinois were *probability* and *statistics*. Reactions to the noticed change came from eight sources. A New York teacher had this to say:

> I do know I'm going to get down the probability and statistics manuals that have been up there, and I'll probably do that next year. I usually go through everything that I think is important, then if I have time left over I do the probability. But now I see four or five questions on it, and they're tricky. Next year I will cover it.

Another New York teacher added:

> There was a lot of geometry, and I was glad I had skipped over something else and done geometry because those were easy questions. It would have been a shame for the kids to miss something that easy. But the probability and statistics--in fact--our math supervisor told us, "They're going to keep putting it on there until you guys start teaching it. That's what the state wants."

If the states' intentions were for teachers to implement instruction in the areas of *probability* and *statistics*, it appeared to be an effective strategy according to the reports of teachers interviewed in this study.

Reported alterations due to writing emphasis

Respondents reported that the test design in Illinois and New York emphasized writing skills due to the writing assessment section of the Illinois test and the social studies essay tests in New York. Teachers from both states had concerns regarding preparing students for the writing sections of the tests. The changes that occurred as a result of the tests were mentioned by an Illinois teacher:

> We started off the state wanted to test the writing skills. Okay, so we all got trained for that. So the first year we gave a little prewriting assignment, and we went through the exercises, and they took the test. This year we are doing it four times for each quarter. So it's getting now we are working more and more on getting them ready for this test.

An emphasis on the writing process in their curricula was mentioned by a few teachers (7) in New York and Illinois as a result of the design of the state tests.

Reported social studies and science alterations

Teachers from Tennessee commented on the mismatch between the social studies curriculum and the content of the state test. A Tennessee principal spoke of the changes in that test and how teachers would overcome this to improve student scores:

> Going back to the graphs, I guarantee you next year it be same test. They come out with one test and you use it for five years. And I don't care how ethical you are, in the back of your mind you've still got the idea that there's the graphs, and you're going to make sure your students know how to do graphs.

Half (6) of the principals indicated that their school systems had altered their curricula in writing or social studies to more closely match the state tests in those content areas. A teacher had this comment to add about New York's social studies test:

> Social studies keep changing. I guess what happened three years ago they added a New York State PET test in social studies, and that has changed the way we're teaching social studies somewhat because we know what the state is asking us.

Science was not mentioned as having been altered because of the state tests. Three respondents from New York indicated that the fourth

grade teachers had experienced changes in their science instruction due to the recent changes in the state test for that grade level. The science test for fourth grade requires students to manipulate objects and formulate hypotheses based on these interactions. These reports add to the growing data suggesting the influence that state testing has on curricular decisions and actions.

Reported narrowing of the curriculum

When curricular changes are implemented that reduce the curriculum to limited skills and prevent teachers from expanding on concepts through a variety of instructional strategies, it is referred to as *narrowing the curriculum* (Darling-Hammond & Wise, 1985). Previous studies have indicated that this commonly occurs in high stakes testing situations. According to definition of *high stakes,* however, none of these state tests would be considered high stakes situations. The resulting consequences of low scores in each of these states are not threatening enough to local educators to be considered high stakes situations. Teachers' reported actions, however, indicate a more serious interpretation of the possible consequences of low scores.

An overriding theme throughout the interviews was the reported time constraints imposed by the pressure associated with assuring successful student performance on state tests. It was these reported time factors that encouraged teachers to many times limit instruction to state tested skills. The responses that suggested narrowing of the curriculum emanated from participants from all three states. The following two remarks typify teachers' beliefs:

> I know that on the New York test they only need very, very minimal knowledge of probability. It's something that I will teach them just to the minimal level. I don't have to go any further, whereas,

> perhaps if it weren't for the test, and perhaps, if I felt I had more time, I might really get more into that particular area.
>
> There are things in math that are skipped over that I feel are pertinent and would give the child a better understanding of the concepts, but we skip over it because it's not tested and we do not have time to teach everything. (IL)

Time, as reported by respondents, was a factor that affected both curricular decisions and instructional strategies. Although there are not particularly high stakes associated with any of these tests, respondents continually indicated the emphasis they placed on student performance through the changes they initiated in curricula.

Reported impact on instructional strategies

Many participants provided responses that indicated a reluctance to use innovative instructional strategies such as whole language, cooperative learning, and higher order thinking activities due to the belief that using these may deter students from performing as well on state assessments. Respondents reported using instructional strategies that reflect more traditional methods of instruction to assure better opportunities for student success on state tests. These responses were provided when participants were asked what effect removing the state tests would have on their teaching. The following response was from a Tennessee teacher:

> I spend a lot of time testing for the basic skills and everything. The fact is that I used to try more creative type things--more innovative type of things, and now, I don't feel that I have time for that. For example, I thought that it would be nice if we could do a little play and take about a week outfrom reading and study the parts, and everybody could study the parts, and we could put on this little play. It lay on my desk for a few days before I just put it away because I felt, "I've got all this other I've got to do instead."

Another Tennessee teacher provided this comment:

> I get tired of doing worksheets and the things that I feel we have to do. When I taught science, and I had plenty of time to prepare for a lesson, you know you could teach by bringing in plants and animals and bones. The kids that didn't like science, they learned, but they liked it. And now, when you have so much that you have to teach, you don't have time to take the whole period maybe to do an experiment or something like that. You feel pressured to get through with your book, so you are ready to take the test.

A New York principal had concerns about how instruction may change if the tests were not so emphasized:

> I think if the tests were removed, you'd find that teachers would have a greater willingness to do integrated projects. I think that they are afraid that they don't have time to cover all the material that a test might measure.

The following is a summarized list of actions that respondents reported they would initiate if state testing were eliminated:

1) Go into greater depth with concepts
2) Provide greater creativity in teaching
3) Integrate curricula
4) Develop and use more higher order thinking skills activities
5) Provide more literature based instruction
6) Develop and utilize improved questioning strategies
7) Arrange scope and sequence of concepts to meet student needs
8) Teach more local topics

Principals provided more suggestions for altering instructional and curricular decisions than did teachers which may indicate their frustration with the effects of the current testing practices. Several teachers indicated that they would feel much less pressured to finish the curricula before the tests are given each spring if they were eliminated.

Although no specific comments were provided concerning the use of more traditional instructional strategies, the instructional actions that teachers reported were characteristic of traditional teaching methods.

Several respondents (15) indicated that no changes would occur in their curricular choices or instructional strategies if the tests were eliminated. For the Illinois teachers, their curricular choices were governed by local nine week objectives, therefore, eight of them did not believe that eliminating state testing would change anything. Despite these responses, an analysis of the data yielded responses from 41 of the 42 participants indicating a belief that alterations had occurred in either instructional strategies or curricular direction due to the influence of state tests.

Conclusion

Teachers and principals alike provided responses in this study that indicate that several actions have been implemented by teachers as a result of state testing that have altered curricular emphasis and instructional strategies. The results support several findings from previous studies based on reactions to standardized testing practices. Differences exist due to the qualitative design of this study and its examination of the impact of state testing on local school systems. When the main purpose of state mandated testing according to some state department personnel is local school system curricular improvement, then the results of this study indicate that state testing is indeed having an impact.

Despite reporting some dissatisfaction with the design of the state tests, particularly social studies and science, teachers consistently

provided responses indicating that there were alterations all areas of the curricula to better prepare students for state assessments. Changes in the sequence of topics, altering curricula to emphasize tested topics, alterations in instructional strategies, allocating more instructional time to tested concepts, and narrowing the curriculum to tested concepts are all practices that teachers reported in this study.

Although this study was designed as qualitative research, it is important to note that 41 of the 42 respondents reported changes in either curricular emphasis or instructional strategies as a result of state tests. That is an impact that must be noticed by those responsible for the implementation of state testing practices. Principals and teachers alike reported being concerned and frustrated with the lack of control of testing decisions at the local level. The lack of local input into state testing decisions leaves teachers and principals powerless to affect state assessment decisions. The avenue for control, therefore, is through curricular and instructional changes such as those reported by respondents in this study, to improve student scores.

Perhaps it is important to commend state departments of education for gaining such control over local schools' curricular decisions through state testing. It is possible that although changes are being implemented some of these changes may not be strategies that state department personnel had in mind. When teachers abandon innovative instructional strategies or are reluctant to begin using them, the children are most affected through alterations in the learning environment. Current research and its potential for improving the learning process and environment for children are being overlooked due to the pressure that teachers report to raise students' test scores.

The value placed on student test scores is evident through the mere adoption of state assessment instruments by state legislative bodies and the support of the general public. As this study indicates, teachers are capable of implementing changes in the educational process due to state testing formats. The curricular changes may be viewed by many as effective in improving instruction. It would be more appropriate, however, for state departments to assess the impact that their testing procedures and formats have on the learning process. The effects of state testing on instructional strategies and curricular decisions is a factor that may be missing from all 50 state departments' assessment centers, but may be the most critical aspect of the assessment process. The success of a state's testing program should be measured by its effects on the learning process and ultimately the results of that should be judged as more important than changes in curricular direction.

References

Airasian, P. W., & Madaus, G. F. (1983). Linking testing and instruction: Policy issues. *Journal of Educational Measurement, 20*, 103-118.

Blumer, H. (1969). *Symbolic interactionism.* Englewood Cliffs, NJ: Prentice-Hall.

Corbett, H. D., & Wilson, B. L. (1990). *Unintended and unwelcome: The local impact of state testing.* Philadelphia, PA: Research for Better Schools, Inc.

Darling-Hammond, L., & Wise, A. E. (1985). Beyond standardization: State standards and school improvement. *Elementary School Journal, 85*(3), 315-335.

Eisenhart, M. A., & Howe, K. R. (1990, April). *Validity in qualitative research.* Paper presented at the annual meeting of the American Educational Research Association, Boston.

Erickson, F. (1986). Qualitative methods of research on teaching. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (pp. 119-161). New York: MacMillan.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory.* Hawthorne, NY: Aldine Publishing.

Goetz, J. P., & LeCompte, M. D. (1984). *Ethnography and qualitative design in educational research.* Orlando: Academic Press.

Green, K. E., & Stager, S. F. (1985, April). *Teachers' attitudes toward testing.* Paper presented at the annual meeting of the National Council on Measurement in Education, Chicago.

Hutchinson, S. A. (1988). Education and grounded theory. In R. R. Sherman & Webb, (Eds.), Qualitative Research in Education (pp. 50-68). Philadelphia: Falmer Press.

Kellaghan, T., Madaus, G. F., & Airasian, P. W. (1982). *The effects of standardized testing.* Boston: Kluwer Nijhoff Publishing.

Koretz, D. (1988). Arriving in Lake Woebegon: Are standardized tests exaggerating achievement and distorting instruction? *American Educator: The Professional Journal of the American Federation of Teachers, 12*(2), 28-46.

Lewin, K. (1984). *Selection and curriculum reform: Education versus qualifications.* London: Allen & Unwin.

Madaus, G. F. (1985). Testing scores as administrative mechanisms in educational policy. *Phi Delta Kappan, 66*, 611-616.

Martinez, M. E., & Lipson, J. I. (1989). Assessment for learning. *Educational Leadership, 46*(7), 73-79.

Neill, D. M., & Medina, N. J. (1989). Standardized testing: Harmful to educational health. *Phi Delta Kappan, 70*, 688-697.

Romberg, T. A., Zarinnia, E. A., & Williams, S. R. (1989). *The influence of mandated testing on mathematics instruction: Grade 8 teachers' perceptions.* Madison, WI: University of Wisconsin, Center for Educational Research, School of Education, and Office of Educational Research and Improvement of the United States Department of Education.

Rottenburg, C., & Smith, M. L. (1990, April). *Unintended effects of external testing in elementary schools.* Paper presented at the annual meeting of the American Educational Research Association, Boston.

Salmon-Cox, L. (1981). Teachers and standardized achievement tests: What's really happening? *Phi Delta Kappan, 62*, 631-634.

Stake, R. E., Bettridge, J., Metzer, D., & Switzer, D. (1987). *Review of literature on effects of achievement testing.* Urbana, IL: University of Illinois, Center for Instructional Research and Curriculum Evaluation.

Taylor, S. J., & Bogdan, R. (1984). *Qualitative research methods: The search for meanings* (2nd ed.). New York: John Wiley.